2-408.36

1036

FERNALD
LOG 1-0013
OCT 6 9 35 AM '97
FILE 6446.3

OhioEPA
State of Ohio Environmental Protection Agency
Southwest District Office

401 East Fifth Street
Dayton, OH 45402-2911

TELE: (937) 285-6357 FAX: (937) 285-6249

George V. Voinovich, Governor
Nancy P. Hollister, Lt. Governor
Donald R. Schregardus, Director

October 3, 1997

RE: DOE FEMP
MSL 531-0297
HAMILTON COUNTY
DISAPPROVAL - IMPACTED
MATERIAL PLACEMENT PLAN

Mr. Johnny Reising
U.S. Department of Energy, Fernald Area Office
P.O. Box 538705
Cincinnati, OH 45253-8705

Dear Mr. Reising:

Ohio EPA has reviewed DOE's August 22, 1997 submittal, "Submittal of On-Site Disposal Facility Impacted Material Placement Plan and Specialized Placement Plan No. 1 for Oversized Metals and Overlength Structural Steel Beams/Columns." Attached are Ohio EPA comments detailing our concern with the document.

If you have any questions, please contact me.

Sincerely,

for Tom

Thomas A. Schneider
Fernald Project Manager
Office of Federal Facilities Oversight

cc: Jim Saric, U.S. EPA
Terry Hagen, FDF
Ruth Vandegrift, ODH
Francie Barker, PRC
Manager, TPSS/DERR,CO
Dave Ward, GeoTrans

Q:\FEMP\OU2\IMPPRV2.WPD

1

Ohio Environmental Agency Comments on the Impacted Materials Placement plan for the On-Site Disposal Facility , Revision H

1. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: General Comment Pg #: Line #: Code: M
Original Comment #:
Comment: Ohio EPA disagrees with DOE's proposal to exceed the waste acceptance criteria with Oversized Debris. As stated in both Ohio EPA's concurrence letters and numerous citizens comments on the various RODs incorporating on-site disposal, the waste acceptance criteria are measures not to be exceeded. Therefore, Ohio EPA will not approve the Impacted Materials Placement Plan unless reference to placement of oversized materials in the OSDF is removed.

2. Commenting Organization: OEPA Commentor: HSI
GeoTrans, Inc.
Section # 1.2 Pg.#: 1-1 Line # 15 Code: C
Comment: The text states that approximately 80 percent of the expected OSDF material will be impacted soil. This conflicts with the estimated total of 85 percent on Page 7-1, line 5.

3. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 2.2 Pg #: 2-1 Line #: 21 Code: c
Original Comment #:
Comment: Add a citation to OAC 3745-31-05(A)(3) for employing Best Available Technology (BAT) for controlling emissions from new sources of air pollution.

4. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 2.4 Pg #: 2-3 Line #: 40 Code: c
Original Comment #:
Comment: Add a line to this large bullet committing to the deployment of BAT for the control of emissions.

5. Commenting Organization: OEPA Commentor: HSI
GeoTrans, Inc.
Section #: 3.2 Pg. #: 3-2, Figure 3.1 Code: E
Comment: For clarity the figure should be identified as a cross-section.

6. Commenting Organization: OEPA Commentor: HSI
GeoTrans, Inc.
Section # :5.2 Pg. #: 5-1 Line # 19-22 Code: E
Comment: The sentence beginning on line 19 is unclear.

7. Commenting Organization: OEPA Commentor: HSI

GeoTrans, Inc.
Section # :5.2 Pg. #: 5-1 Line # 23 Code: E
Comment: The word "compatible" does not make sense in the sentence. It is likely a typo of "compacted."

8. Commenting Organization: OEPA Commentor: HSI
GeoTrans, Inc.
Section # :5.2 Pg. #: 5-1 Line # 28 Code: E
Comment: The word "compatible" does not make sense in the sentence. It is likely a typo of "compacted."

9. Commenting Organization: OEPA Commentor: HSI
GeoTrans, Inc.
Section #: 6.7 Pg. #: 6-5, Figure 6-1 Code: C
Comment: The annotation for Figure 6-1 (1), "3 FT SELECT IMPACTED WASTE" should be revised to, "2- OR 3-FT SELECT IMPACTED WASTE" to be consistent with the text and Figure 3-1. Also, the 3:1 lift slope down toward the intercell berm is shown to intersect with the beginning of the intercell berm. This conflicts with Figure 6-2, which shows a protective zone of select impacted material (unknown thickness) as the point of intersection. Will the intercell berm be protected by a layer of select impacted material, and if so, how much?

10. Commenting Organization: OEPA Commentor: HSI
GeoTrans, Inc.
Section #: 6.7 Pg. #: 6-6, Figure 6-2 Code: C
Comment: See above comments on Figure 6-1.

11. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 8.4.1 and 8.4.2 Pg #: 8-2,3 Line #: Code: general
Original Comment #:
Comment: The discussion of the placement and compaction procedures for Category 3 items is somewhat ambiguous. Ohio EPA has attempted to articulate our comments in the specific comments section, but it may be easier to re-write the entire section. Category 3 is defined as items that are incompressible, require individual placement, and are no more than 4 feet thick. However, Category 3 also includes structural steel members that are no longer than 10 feet. The discussion might be more easy to follow if items that truly require individual handling (such as transite bundled to pallets and blocks of concrete) were explained separately from the structural steel members. The discussion should cover the placement, spacing, compaction, performance

specifications, etc. A figure similar to Figure 8-1 should be prepared for structural steel members.

12. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 8.4.1 and 8.4.2 Pg #: Line #: Code: general
Original Comment #:
Comment: There are currently tangled masses of re-bar stored on the Plant 1 pad. Please describe which material category these masses fall under and the placement procedures for them.

13. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 8.4.1 Pg #: 8-2 Line #: 38 Code: c
Original Comment #:
Comment: The reasons for the spacing requirements for structural steel beams/columns/pipe sections are not obvious. The separation for pieces with cross-sections greater than 9 inches are two feet but the separation for pieces less than 9 inches in cross-section is only three inches. Please provide a discussion of these spacing requirements

14. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 8.4.1 Pg #: 8-2 Line #: 43 Code: c
Original Comment #:
Comment: The Plan describes the placement of deformed structural steel and states that they will be placed such that they lay flat. It is easy to imagine 'cork-screwed' pieces of steel that will not lay flat. How will 'cork-screwed' steel be placed? Are there 'straightness' specifications for structural steel that Operable Unit 3 must meet prior to transportation to the OSDF? The general description of Category 3 material requires a cross-section of less than four feet. Is this to be interpreted to mean that structural members can be cork-screwed at a maximum of four feet out of a flat plane?

15. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 8.4.1 Pg #: 8-3 Line #: 7 Code: c
Original Comment #:
Comment: The Plan states that Category 3 items will be placed with an adequate spacing between items to allow Category 1 material to be placed and compacted with available equipment. Describe how this is to be achieved in the case of structural steel with members with a cross-section of less than 9 inches and a separation distance of only three inches.

16. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 8.4.1 Pg #: Line #: 19 Code: c

Original Comment #:
Comment: Does the four foot spacing between horizons of Category 3 material apply to structural steel?

16. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 8.4.2 Pg #: 8-3 Line #: 42 Code: c
Original Comment #:
Comment: Elaborate here on the specifics of the performance specifications (two inch ruts maximum and no visible deflection under moving proof rolling equipment) and how these specifications apply to structural steel. Specifically, will these performance specifications apply to the first lift of Category 1 material to be placed over the steel members or will the performance specification apply to the 'final' lift of Category 1 material. If the intent is to apply to the 'final' lift, how many intervening lifts will be compacted before the performance criteria is applied?

17. Commenting Organization: OEPA Commentor: HSI
GeoTrans, Inc.
Section #:8.5.1 Pg. #: 8-5 Line # 9-17 Code: C
Comment: What is the lateral extent to which Category 4 wastes can be placed?

18. Commenting Organization: OEPA Commentor: HSI
GeoTrans, Inc.
Section #:8.5.2 Pg. #: 8-5 Line # 21-32 Code: M
Comment: According to lines 1-4 of page 5-2, Category 4 materials include green wastes from clearing, stripping, and grubbing operations. These types of operations would likely generate tree root balls which provide specific landfill disposal concerns. Are root balls expected to be disposed at the OSDF, and if so, what are the associated procedures/practices for placement and compaction?

19. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 8.6.4 Pg #: 8-7 Line #: 16 Code: c
Original Comment #:
Comment: The Ohio EPA agrees that the primary criterion regarding the placement of asbestos-containing material (ACM) is the protection of the health of the OSDF personnel (page 8-6, line 25). We also agree that in the case of relatively straight lengths of pipe covered with ACM, the pipes should be placed in straight trenches similar to those used for the disposal of double-bagged asbestos. Our comment concerns the disposal of other shapes. The Plan states that these would be placed in a 20 foot square excavation but provides no additional information such as separation distance between pieces, length limitations on individual pieces, and number of pieces

in the same excavation. Please add a section to clarify these issues.

20. Commenting Organization: OEPA Commentor: HSI
GeoTrans, Inc.
Section #:8.6.5 Page 8-7 Line #43 Code: E
Comment: The word "precondivity" is a typo and should be replaced with "preconditioning".

21. Commenting Organization: OEPA Commentor: HSI
GeoTrans, Inc.
Section #:8.6.5 Page 8-9 Line# 7-15 Code: C
Comment: What are the compaction procedures, if any, for high moisture content sludges?

22. Commenting Organization: OEPA Commentor: HSI
GeoTrans, Inc.
Section # :9.3 Pg. #: 9-1 Line # 30 Code: M
Comment: The discussion of fugitive emissions is restricted solely to airborne particulates. Organic and inorganic vapors are not addressed. According to Table 4-1, which presents waste acceptance criteria for the OSDF, there are potentially acceptable wastes which could be composed of highly volatile organic and inorganic compounds which could present a health risk to site workers. For example, material could be hauled and disposed at the OSDF (for up to 25 years) which could contain up to 5.6 percent mercury, 10 percent toxaphene and 39 percent chloroethane.
{The 1989 OSHA PEL for Mercury vapor TWA is 0.05 mg/m3 [skin] alkyl compounds: C 0.1 mg/m3 [skin]. The 1989 OSHA PEL for toxaphene TWA is 0.5 mg/m3 [skin]. The OSHA TWA for chloroethane is 1000 ppm.}
Are there vapor phase fugitive emissions policies and procedures specifically developed for the OSDF? If so, they should be cited in this section. If not, all references to "fugitive emissions" should be modified to "fugitive particulate emissions" or to "fugitive dusts".

23. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 11.1 Pg #: 11-1 Line #: 7 Code: c
Original Comment #:
Comment: Is the use of the term "surfactants" appropriate in this context? We suggest using the term "crusting agent".

24. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 11.2 Pg #: 11-1 Line #: Code: M
Original Comment #:
Comment: Provide additional detail on the proposed use of the East Impacted Stockpile for winter cover.

1. Will the run-off from the seasonal cover all be directed to the leachate collection system (LCS) or will some of the run-off flow outside the LCS? It is our understanding that some of the anchoring system for the liner will be located outside the area that drains into the LCS and that these flows would enter the OSDF diversion ditches.
2. Will erosion control surface matting be used or will crusting agents be used or will a combination of the two methods be used to control erosion? It is our understanding that pine tar-based crusting agents have been successfully employed at several locations including the Active Fly Ash Pile, but we have no information regarding the durability or longevity of these crusting agents.
3. The design objectives of the runoff control system are not clear. Line 29 says that flow should infiltrate in to the LCS in an unimpeded manner and line 30 states that inspection should confirm that 'excessive sedimentation' is not occurring. Is the design objective to allow sediment to expeditiously drain into the LCS or is the design objective to remove the sediment prior to infiltration into the LCS? The former objective is not consistent with the design criteria of the LCS and the later objective is not consistent with the 'excessive sedimentation' inspection.
   Has the use of a temporary riser been considered for the directing the run-off into the LCS? This riser could incorporate the design elements used in the previously approved sediment basins. It could tie in at the bottom with the granular drainage layer and would be designed to be removed at the start of the construction season. After removal, the drainage layer and protective layer would be replaced/repaired to the original design.
4. Please provide detailed plans for the seasonal cover final grade and design. We anticipate that design elements will include fugitive dust and erosion control as well as run-off control. If any areas will need protection from winter freezing that are outside of the area that drains into the LCS, these areas should be noted. The use of the East Stockpile should be limited to those areas that drain into the LCS. Areas that drain outside of the LCS which need to be protected should be covered with non-impacted material.

Ohio EPA Comments on the Impacted Material Placement Quality Assurance Plan

25) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 1 Pg #: Line #: Code: general
Original Comment #:

Comment: The Quality Assurance Plan should be re-written or amended to address the documentation needed and the procedures to be followed to comply with the design criteria listed in Section 2.11.2.5 of the final Design Criteria Package for the OSDF (Revision 0). The re-write should address the following:

1. Placement to avoid differential settlement
2. Protection of the liner and cover system
3. Sequence of placement to minimize the area of exposed impacted material
4. Placement of material to achieve homogeneous large-scale mechanical properties
5. Placement of material to avoid preferential migration pathways for leachate

The Plan should address especially how 'as-placed' records of previously placed materials will be used to direct the placement of subsequent materials. For example the Plan should specifically state how the placement of trenches for asbestos waste will be tracked, the records kept to document these locations, and the procedures used to place subsequent trenches in succeeding lifts. Similarly, the procedures used to establish that no asbestos trenches are dug into Category 2 through 5 materials should be clearly spelled out. The Plan should address how wastes are surveyed in, how elevations are determined, how lift records are maintained and should also contain an exhaustive list of placement restrictions.

26) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: A.3.4 Pg #: A.3-2 Line #: 35 Code: e
Original Comment #:
Comment: It appears that there is a word missing here which changes the meaning of the sentence. Add the word "that" between "tanks" and "cannot".

27) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: A.3.4 Pg #: A.3-3 Line #: 1 Code:
Original Comment #:
Comment: The dimensions of large steel pipe mentioned here ("Large steel pipes that cannot be placed in a lift not greater than 18 in (450mm) but which can be placed individually such that the highest part of the pipe is not more than 4 ft. (1.2m) above the ground will be classified as Category 3 items (individual items).") is in conflict with the 3rd bullet on page 4-1 which states "the maximum thickness of irregularly shaped metals or other components of a building superstructure or finish component shall be 18 in. (450mm)".

28) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: A.4.1 Pg #: A.4-1 Line #: 21 Code: c
Original Comment #:
Comment: It is unclear what the sentence"These material types will be compacted prior to

establishing their parameters" means. What are the parameters that are being referred to?

29) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: A.4.1 Pg #: A.4-1 Line #: Code:
Original Comment #:
Comment: The section "Placement and Compaction Quality Control" is unclear. We understand the use of a Proctor test for to establish optimal moisture content of soils for satisfactory compaction. We also know that this test is dependent on soil types and that two different soils will produce different Proctor curves. It is unclear is how Proctor tests will produce usable data on the highly variable nature of the soils that will be received at the OSDF.